IN THE CLAIMS

Claim 1.   (Previously Presented)   A method of switching frames at a first switch on a communication network, comprising the steps of:

receiving a frame at ~~a~~ the first switch, the frame having an Ethernet Media Access Control (MAC) header including at least one 6 byte MAC address, the 6 byte MAC address including an address portion which is divided into a plurality of sub-fields, at least two of the sub-fields of the address portion being greater than 2 bits in length and shorter than 5 bytes in length and each sub-field having local significance to a separate switch on the communication network such that each separate switch will read only one of the plurality of sub-fields of the MAC address when making a switching decision for the frame;

extracting, by the first switch, frame contained destination information from one of the plurality of sub-fields of the address portion of the MAC address associated with the received frame by reading only one of the sub-fields within the MAC address;

making a switching decision within the first switch based on the extracted frame contained destination information from the one read sub-field without performing a lookup in a forwarding table based on the entire address portion of the MAC address to determine an output port from the first switch over which the frame should be forwarded onto the communication network;

forwarding the frame within the first switch to the output port over which the frame should be forwarded onto the communication network; and

transmitting said frame from the determined output port onto the communication network;

whereby a received frame may be transmitted from an input port to a determined output port and then onto the communication network based on the frame contained destination information contained within the sub-field of the address portion of the MAC address without performing a table lookup operation on the entire address portion of the MAC address to determine the output port.

Claims 2-3. (Cancelled)